**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. – 21. (Cancelled)

22. (Currently Amended) A pressure ~~Pressure~~ measurement device comprising:

~~provided with~~ a pressure sensor adapted to perform pressure measurements in a ~~the~~ left ventricle of a heart, wherein the pressure sensor is connected to a measurement unit to receive pressure measurement values obtained from said sensor, and

a processing means adapted to determine, during a number of measurement periods, each measurement period including a number of heart cycles, a set of pressure values [[,]] and ~~also~~ a set of first order time derivative values determined from the set of pressure values,

wherein ~~characterized in that~~ said processing means also is adapted to calculate ~~the~~ maximum ~~values of the set of~~ first order time derivative values for each of the heart cycles during one measurement period, and to calculate a predefined parameter,

wherein the predefined parameter is an ~~being the~~ average or median value of said ~~the~~ maximum first order time derivative values from the one measurement period,

wherein the pressure measurements are adapted to be performed during measurement periods related to different predetermined medical implant settings in a medical implant controlling ~~the~~ application of stimulation pulses at least in the left and right ventricles of the heart,

wherein the different predetermined medical implant settings include that of a VV-interval, and

~~that~~ wherein an optimal medical implant device setting of the VV-interval is identified as a ~~the~~ setting where the predefined parameter is maximal.

23. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 22, further comprising ~~characterized in that said device includes~~ a display means for displaying, ~~preferably in real-time,~~ during a measurement period, curves representing the set of pressure values and the ~~set of~~ determined first order time derivative values.

24. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 22, further comprising ~~characterized in that said device comprises~~ a pressure measurement guidewire at which said pressure sensor is arranged.

25. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 22, wherein ~~characterized in that~~ the pressure measurement device is arranged in said medical implant, said medical implant being a heart stimulating device~~, e.g. a pacemaker, cardioverter or defibrillator,~~ and wherein ~~that~~ said pressure sensor is arranged at a heart electrode lead connected to said heart stimulating device.

26. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 22, wherein the calculated ~~characterized in that said~~ value of the predefined parameter is added to a measurement session list of measurement periods.

27. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 22, wherein ~~characterized in that~~ the pressure measurement is repeated for other predefined implant device settings.

28. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 22, wherein ~~characterized in that the~~ implant device settings are ~~setting is~~ adapted to be varied during a measurement session according to a predefined search pattern.

29. (Currently Amended) The pressure ~~Pressure~~ measurement device according to claim 23, wherein calculated ~~characterized in that~~ values of the predefined parameter are displayed in a three dimensional illustration.

30. (Currently Amended) A method ~~Method~~ for monitoring, determining by measurement and calculation, and graphically displaying physiological variables related to blood pressure, comprising at least the following steps:

a) detecting continuously during at least one [[a]] measurement period left ventricular pressure of a heart ($P_{LV}$), derived from a guidewire-mounted pressure sensor;

b) transducing said left ventricular pressure to a processable signal and delivering said processable signal to a processing means being able to process said processable signal;

c) receiving said processable signal;

d) calculating a ~~the~~ first order time derivative ($dP_{LV}/dt$) of said left ventricular pressure by processing said processable signal;

e) forming and displaying a set of values representing the left ventricular pressure ($P_{LV}$) and a set of values representing the first order time derivative of said left ventricular pressure ($dP_{LV}/dt$);

f) calculating a ~~the~~ value of a predefined parameter of said set of first order time derivative values during the at least one measurement period, wherein the predefined parameter is an ~~the~~ average or median value of ~~the~~ maximum values of the set of first order time derivative values for each ~~of the~~ heart cycle ~~cycles~~ during the at least one measurement period, wherein the pressure measurements are performed during a plurality of measurement periods using predetermined medical implant settings in a medical implant ~~(20)~~ controlling ~~the~~ application of stimulation pulses at least in ~~the~~ left and right ventricles of the heart, wherein the predetermined medical implant settings include that of an VV-interval and ~~that the implant setting includes~~ a first time difference $\Delta 1$, wherein the first time difference is a ~~being the~~ time between stimulations in the left and right ventricles, ~~and~~

g) displaying said calculated value of the predefined parameter in a measurement session list that includes ~~may include~~ calculated values of the predefined parameter from other measurement periods, and

h) choosing a predetermined medical implant setting of the VV-interval from the measurement session list that fulfills an optimal implant setting criterion.

31. (Currently Amended) A method ~~Method~~ according to claim 30, wherein ~~characterized in that~~ in step f) only parts of the set of first order time derivative values that fulfill ~~fulfil~~ certain calculation criteria are included in calculating the value of the predefined parameter such ~~, wherein this results in~~ that artifacts ~~artefacts~~ and disturbances are suppressed.

32. (Canceled)

33. (Currently Amended) A method ~~Method~~ according to claim [[32]] 31, wherein ~~characterized in that~~ said optimal implant setting criterion is to choose a ~~the~~ maximum amplitude of ~~the~~ average values.

34. (Currently Amended) A method ~~Method~~ according to claim 30, wherein ~~characterized in that~~ the predetermined medical implant settings ~~setting~~ further include ~~includes~~ a second time difference Δ2, the second time difference being a ~~the~~ time between stimulations in a ~~the~~ right atrium and the right or left ventricle.

35. (Currently Amended) A method ~~Method~~ according to claim 30, wherein ~~characterized in that the~~ implant device settings are ~~setting is~~ varied according to a predefined search pattern.

36. (Currently Amended) A method ~~Method~~ according to claim 30, wherein ~~characterized in that a~~ the at least one measurement period is less than 30 seconds. ~~and preferably 10 seconds.~~

37. (Currently Amended) A method ~~Method~~ according to claim 30, wherein ~~characterized in that~~ a measurement session list ~~that~~ includes ~~may include~~ calculated values of the predefined parameter from measurement periods obtained during a measurement session of less than 60 minutes. ~~and preferably less than 30 minutes.~~

38. (Currently Amended) A computer program directly loadable into an ~~the~~ internal memory storage of a processing means within a control unit, comprising ~~the~~ software code means for performing the following steps: ~~of claim 30~~

a) detecting continuously during at least one measurement period left ventricular pressure of a heart ($P_{LV}$), derived from a guidewire-mounted pressure sensor;

b) transducing said left ventricular pressure to a processable signal and delivering said processable signal to a processing means being able to process said processable signal;

c) receiving said processable signal;

d) calculating a first order time derivative ($dP_{LV}/dt$) of said left ventricular pressure by processing said processable signal;

e) forming and displaying a set of values representing the left ventricular pressure ($P_{LV}$) and a set of values representing the first order time derivative of said left ventricular pressure ($dP_{LV}/dt$);

f) calculating a value of a predefined parameter of said set of first order time derivative values during the at least one measurement period, wherein the predefined parameter is an average or median value of maximum values of the set of first order time

derivative values for each heart cycle during the at least one measurement period, wherein the pressure measurements are performed during a plurality of measurement periods using predetermined medical implant settings in a medical implant controlling application of stimulation pulses at least in left and right ventricles of the heart, wherein the predetermined medical implant settings include that of an VV-interval and a first time difference Δ1, wherein the first time difference is a time between stimulations in the left and right ventricles,

g) displaying said calculated value of the predefined parameter in a measurement session list that includes calculated values of the predefined parameter from other measurement periods, and

h) choosing a predetermined medical implant setting of the VV-interval from the measurement session list that fulfills an optimal implant setting criterion.

39. (Currently Amended) A computer program that can be stored on a computer usable medium, comprising readable program code for causing a processing means in a control unit to control an execution of the following steps: ~~of claim 30~~

a) detecting continuously during at least one measurement period left ventricular pressure of a heart ($P_{LV}$), derived from a guidewire-mounted pressure sensor;

b) transducing said left ventricular pressure to a processable signal and delivering said processable signal to a processing means being able to process said processable signal;

c) receiving said processable signal;

d) calculating a first order time derivative ($dP_{LV}/dt$) of said left ventricular pressure by processing said processable signal;

e) forming and displaying a set of values representing the left ventricular pressure ($P_{LV}$) and a set of values representing the first order time derivative of said left ventricular pressure ($dP_{LV}/dt$);

f) calculating a value of a predefined parameter of said set of first order time derivative values during the at least one measurement period, wherein the predefined parameter is an average or median value of maximum values of the set of first order time derivative values for each heart cycle during the at least one measurement period, wherein the pressure measurements are performed during a plurality of measurement periods using predetermined medical implant settings in a medical implant controlling application of stimulation pulses at least in left and right ventricles of the heart, wherein the predetermined

medical implant settings include that of an VV-interval and a first time difference Δ1, wherein the first time difference is a time between stimulations in the left and right ventricles,

g) displaying said calculated value of the predefined parameter in a measurement session list that includes calculated values of the predefined parameter from other measurement periods, and

h) choosing a predetermined medical implant setting of the VV-interval from the measurement session list that fulfills an optimal implant setting criterion.

40. (New) The pressure measurement device according to claim 22, wherein the different predetermined medical implant settings also include that of an AV-interval.

41. (New) The pressure measurement device according to claim 25, wherein the heart stimulating device is a pacemaker, cardioverter or defibrillator.

42. (New) The method according to claim 30, wherein the predetermined medical implant settings also include that of an AV-interval.

43. (New) A pressure measurement device comprising:

a pressure sensor adapted to perform pressure measurements in a left ventricle of a heart, wherein the pressure sensor is connected to a measurement unit to receive pressure measurement values obtained from said sensor, and

a processor adapted to determine, during a number of measurement periods, each measurement period including a number of heart cycles, a set of pressure values and a set of first order time derivative values determined from the set of pressure values,

wherein said processor also is adapted to calculate maximum first order time derivative values for each of the heart cycles during one measurement period, and to calculate a predefined parameter,

wherein the predefined parameter is an average or median value of said maximum first order time derivative values from the one measurement period,

wherein the pressure measurements are adapted to be performed during measurement periods related to different predetermined medical implant settings in a medical implant controlling application of stimulation pulses at least in the left and right ventricles of the heart,

wherein the different predetermined medical implant settings include that of a VV-interval, and

wherein an optimal medical implant device setting of the VV-interval is identified as a setting where the predefined parameter is maximal.